

Application Serial No. 10/589,478

OT-5168

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AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended): Coupling device for an elevator car door and an elevator landing door doors comprising:

cams integral with the car door and driving the landing door, said cams being ~~cams are~~
movably mounted with a variable distance from each other on the car door,
independently from a car door drive belt, belt, and
a connecting drive rod to separate part to drive the cams with a variable distance,
which

wherein the connecting drive rod is mounted on the car door,
wherein the connecting drive rod is and connected to the car door drive belt and to one
of the cams,

wherein said part connecting drive rod is configured to exert exerting a lever action on
said one of the cams cam to drive said one of the cams it towards and away from the other
cam another of the cams with a large displacement relative to a small overtravel drive of the
car door drive belt, in order to: (a) respectively allow to unlock a coupling plate and a its
landing door drive coupling when the doors open; and (b) and to lock the coupling plate and
the landing door drive coupling when the doors it when they close,

wherein said connecting drive rod is: (a) hinged at a first point on a trolley panel of
the car door; (b) hinged at a second point on an attachment tab to the car door drive belt; and
(c) hinged at a third point on said driven cam,

wherein Δ is a distance from the first point at which the connecting drive rod is hinged
to the trolley panel to the second point at which the connecting drive rod is hinged to the car
door drive belt,

wherein π is a distance from the first point at which the connecting drive rod is hinged
to the trolley panel to the third point at which the connecting drive rod is hinged to the driven
cam, and

wherein a ratio of Δ to π is less than 1.

2. (Canceled).

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3. (Currently Amended): Coupling device according to ~~claim 2~~, wherein a ratio between the distance from the connecting rod attachment point to the belt on the hinging point of the connecting rod on the trolley panel and the distance from said connecting rod hinge point to the attachment point on the cam is largely lower than 1, varying according to the length of the connecting rod, and generally lower than $1/3$ claim 1, wherein the ratio of Δ to π is less than about $1/2$.

4. (Currently Amended): Coupling device according to claim 3, wherein ~~said ratio of distances is equal to approximately $7/30$, so that a 7 mm overtravel of the belt relative to the opening or closure of the door drives the cams towards or apart from each other, respectively, by an additional 30 mm.~~

5. (Currently Amended): Coupling device according to ~~claim 2~~ claim 1, wherein an opening position of the cams unlocking mechanically and electrically the coupling plate is advantageously locked in position with an appropriate distance between the cams so as to maintain the plate unlocked, by means of a locking element that mechanically engages the ~~cam drive-connecting~~ drive rod or said driven cam brought into its final drive position.

6. (Currently Amended): Coupling device according to claim 5, wherein the cam opening position is locked in position by means of a final position stop against the connecting drive rod and of an associated hook element with a self-snapping engagement, locking the connecting drive rod in position, and wherein these elements engage as soon as the car door drive belt has been driven over a determined overtravel length as the doors open and close.

7. (Previously Presented): Coupling device according to claim 1, wherein the cams are mounted movably with a variable distance from each other on the car door, by means of ~~an a set of two upper connecting rod and a lower connecting rod rods~~ hinged in a vertical parallelogram, wherein central portions of each of the upper connecting rod and the lower connecting rod are and connected to the car door in their middle, wherein first ends of the upper connecting rod and the lower connecting rods are connected and to said one of the cams, wherein second ends of the upper connecting rod and the lower connecting rod are connected to the another of the cams at their ends, wherein the displacement of the cam

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~~connected to the drive rod is coordinated with the displacement of the corresponding terminal hinge point of the cam drive connecting rod.~~

8. (Currently Amended): Coupling device according to claim 1, wherein the ~~cam drive-connecting drive rod~~ is defined ~~can be replaced by~~ a set of two connecting rods hinged to each other, the first rod being hinged to the car door and connected to the drive belt and the second being linked to the driven cam, ~~which makes cam drive coordination easier.~~

9. (Cancelled).

10. (Previously Presented): Elevator comprising a coupling device for the car door and the landing doors according to claim 1.